MR FORM 8
Page 1 of 2

Mine: Cricket Mtn Lime Plant Quarry
File No: _____

Submitted by:
Applicant Continental Lime Inc.
268 W. 400 S., Suite 201, SLC
Representative Wayne Nixdorf
Plant Manager
Address Box 266, Delta, Utah
84624, (801) - 864-3823

Division of Oil, Gas, and Mining
1588 West North Temple
SLC, UT. 84116

Re: Commitment to Rule M-10

Gentlemen:

I hereby commit the applicant to comply with Rule M-10, "Reclamation Standards" in its entirety, as adopted by the Board of Oil, Gas, and Mining on March 22n 1978.

The applicant will achieve the reclamation standards for the following categories as outlined from Rule M-10 on all areas of the land affected by this mine, unless a variance is granted in writing by the Division.

Rule	Category of Commitment
M-10(1)	Land Use
M-10(2)	Public Safety & Welfare
M-10(3)	Impoundments
M-10(4)	Slopes
M-10(5)	Highwalls
M-10(6)	Toxic Materials
M-10(7)	Roads and Pads
M-10(8)	Drainages
M-10(9)	Structures & Equipment
M-10(10)	Shafts and Portals
M-10(11)	Sediment Control
M-10(12)	Revegetation
M-10(13)	Dams
M-10(14)	Soils

I believe a variance is justified on a site-specific basis for the following subsections of Rule M-10 for reclamation on this mine and have enclosed as an attachment to this letter a narrative statement setting forth a description of the extent of the variance request and factual reasons for said variance request.

Rule	Category of Variance Request (Narrative Attached)
M-10 (12)	60% of land effected has no vegetation in existance at present and an exception to part 12 is requested under Section 3.

STATE OF Utah

COUNTY OF Millard

I, Wayne R. Nixdorf, having been duly sworn depose and attest that all of the representations contained in the foregoing application are true to the best of my knowledge; that I am authorized to complete and file this application on behalf of the Applicant and this application has been executed as required by law.

Signed: [signature]

Taken, subscribed and sworn to before me the undersigned authority in my said county, this 29th day of November, 1979.

Notary Public: [signature]

My Commission Expires: 11-27-81

INDEX

155
155
F 2.10

EAR Registry No. UT050-9-6

UT050-9-62

ENVIRONMENTAL ASSESSMENT RECORD/
TECHNICAL EXAMINATION

TITLE 43 CFR PART 23

APPLICATIONS BY CONTINENTAL LIME, INC. AND UTAH POWER AND LIGHT COMPANY FOR CERTAIN RIGHTS-OF-WAY AND MATERIAL SALE NECESSARY FOR CONSTRUCTION OF A LIMESTONE PROCESSING PLANT IN MILLARD COUNTY.

Ronald B. Bolander — Team Leader — 6 June 1979 — Date

Roy E. Lamb — Environmental Coordinator — 7/10/79 — Date

Mark E. Bailey — Warm Springs Resource Area Manager — 7-12-79 — Date

Ronald T. Hendricks — District Manager, Richfield — 7/19/79 — Date

Attachment 1

TABLE OF CONTENTS

* * * * *

CHAPTER I

DESCRIPTION OF THE PROPOSED ACTION

BACKGROUND

In March of 1979, Continental Lime Inc. advised the BLM's Richfield District of its intention to construct a new limestone processing plant and develop a quarry south of Delta, Utah on state lands. Unpatented mining claims on public lands are also involved. There are several aspects of this proposal over which BLM has no discretion. Because the proposed quarry site is located either on state land or unpatented mining claims, Continental Lime has a statutory right to work those claims and is not subject to BLM environmental assessment requirements. Other actions on state lands such as construction and operation of the processing plant and associated activities are also not subject to BLM assessment or appraisal. There are, however, certain discretionary actions on the part of BLM, some of which are enabling actions. In other words, the project could not proceed without BLM's authorization of certain support facilities which would be located on public lands. This assessment will focus on these actions. Environmental impacts resulting from the overall project will be covered only briefly to provide an overview of impacts from the total project.

The remainder of Chapter I discusses the overall project and identifies the specific federal actions.

THE PROPOSED ACTION

Continental Lime Inc., a wholly owned subsidiary of Steel Brothers Canada Ltd., intends to open a limestone quarry approximately 32 miles south of Delta, Utah in the Cricket Mountains (Figure 1). The quarry site would lie partially in Section 36 of Township 21 South, Range 10 West, State of Utah (state land) and on unpatented mining claims on adjacent public lands (Figure 2).

The company also proposes to construct a lime processing plant on state land immediately west of Highway 257, some 6 miles east of the quarry site (Figure 2). Legal description is:

SW¼ Section 36, Township 21 South, Range 9 West.

A haulage road connecting the quarry and plant site would be upgraded and rerouted in two areas to provide needed access. Total length of the road would be 6.2 miles of which approximately 4 miles is existing road and 2.2 miles new road (Figure 2). The existing road would be upgraded and graveled to accommodate anticipated heavy usage by the applicant. Twelve hundred (1200) tons per day movement of material from quarry to plant on a five-day per week schedule is anticipated. This would require 40 highway tractor-trailer truckloads of 30 tons each per day.

Continental Lime Inc has made application to purchase some 62,000 cubic yards of gravel for use as road base, railroad base and ground fill in connection with the proposed processing plant. A breakdown of specific proposed uses is as follows:

Railroad bed	12,000 cubic yards
Plant roads	13,000 cubic yards
Plant structures	19,000 cubic yards
Road bed-plant to quarry	18,000 cubic yards
	62,000 cubic yards.

Use of the gravel site would not exceed six months. Limestone wastes from the quarry would be used to make needed road repairs, etc.

PROCESSING PLANT

Plant facilities would consist of an office and dry warehouse building, kiln, maintenance shop, control building, various small buildings including a pumphouse and the components of the transportation facilities. Construction is scheduled to begin in October, 1979 and Continental Lime estimates that the facilities would be operational by June, 1980. A railroad spur would be incorporated as part of the plant site tying into the Union Pacific railroad line in Section 36, as shown in Figure 2.

The plant would produce 150,000 tons of quick lime per year (the finished product) which would be transported from the plant to the market via rail and truck. The lime would be used for industrial and chemical purposes, such as pH control and fluxing.

Power for the plant would be provided by Utah Power & Light Company. A transmission line would run 11.77 miles almost due south from the substation located in Section 3, Township 20 South, Range 9 West to the proposed plant site. The overhead line would be a 46 kV single-pole, 4-wire, raptor-proof structure. Poles would be 400 feet apart. Utah Power & Light has conducted a cultural and paleontological inventory of the proposed route. A small substation at the plant site would terminate the line. It would consist of a 2-pole wood or steel structure approximately 35 feet high and 16 feet wide to which service conductors would be attached and upon which would be mounted a 46 kV, 3-pole disconnect switch and fuses.

Workers required for the construction phase of the project would come from the Millard County area. The production labor force would also be from a local source, being drawn from the immediate areas of Delta, Fillmore, and Milford. Six people would be employed at the quarry and 18 at the plant. Expected life of the operation is 30-50 years but could be as long as 100 years if sufficient reserves are found.

The kiln fuel would consist entirely of coal available from several sources within the state of Utah. Water for the production facilities would be obtained from a well drilled on state land near the plant site.

Telephone service to the site would be provided by Continental Telephone using an existing phone line of the Union Pacific Railroad and extending over Section 36 to the plant site.

Pollution control devices to be used at the plant include watersprays, baghouse (for coal handling and lime handling) and a wet scrubber for lime production. The State of Utah has made a preliminary decision to accept these control devices (Appendix).

Quarry

Two areas containing substantial tonnages of good quality limestone were defined by drilling programs conducted in 1978 and 1979. In the Poison Mountain area, Sections 25 and 36, Township 21 South, Range 10 West, the mineable reserve estimate is approximately 24 million tons. Overburden in this area totals about seven million tons. In the area joining the corners of Sections 23, 24, 25 and 26, Township 21 South, Range 10 West, some 30 million tons of mineable limestone are believed present by Continental Lime. Some 7 million tons of overburden are present (Figure 3).

Quarry operations would be carried out in benching fashion using a drill and blast procedure to produce quarry-run sized limestone. The limestone material would be loaded into haul trucks for transportation from the working face to the crushing and screening plant for sizing.

Crushing facilities would be situated at the quarry and would consist of a single impact crusher capable of 100% reduction. Working at a rate of approximately 360 tons per hour. The crushed stone would then be screened on a three-deck screen. Stones larger than 2 inches would be returned to the crusher. The quarry crushing and screening plant would be constructed commencing in August, 1979 and completed by May, 1980.

Electrical power to operate the crushing and screening plant would be supplied either by a diesel generator located near the crusher or a 12 kV transmission line coming from the processing plant. The line would consist of single-pole, double-line, raptor-proof structures. Length of the right-of-way would be 6.2 miles. The access and haulage road would serve as the service road. No blading of the transmission line right-of-way would be allowed.

Dust from the crushing operation would be suppressed by waterspray if water can be located in the area. In the event water is not available, a baghouse would be installed for dust suppression.

Abandonment

Abandonment of the quarry would be conducted in accordance with the reclamation plan approved by the Division of Oil, Gas and Mining of the State of Utah, pursuant to the Utah Mined Land Reclamation Act. In addition, the existing mineral lease from the State of Utah and the special use lease covering the plant site contain requirements with respect to abandonment of the property. These requirements would be satisfied at such time as the leases have been terminated or the plant and quarry abandoned.

FEDERAL ACTIONS

Utah Power & Light Company (UP&L) has applied for a 30-year transmission line right-of-way beginning at an existing substation in Section 3, Township 20 South, Range 9 West, and running almost due south 11.77 miles (9.73 miles on public land, 2.04 miles on state land) to the proposed processing plant (Figure 2) Width of the right-of-way would be 40 feet (20 feet each side of the center line).

Construction would begin in February 1980 and finish by April, 1980. Maintenance of the proposed line would be accomplished by monthly low level flights along the route and an annual foot patrol. No blading of the right-of-way would be allowed.

Continental Lime Inc. has made application to purchase some 62,000 cubic yards of gravel for use as road base, railroad base and ground fill in connection with the proposed processing plant. An existing pit located in the SW¼ of Section 34, Township 21 South, Range 9 West, one mile west of the proposed plant site, would be used (Figure 2). This material would be sold at its appraised value pursuant to the regulations of 43 CFR 3600. A breakdown of specific proposed uses is as follows:

Railroad bed	12,000 cubic yards
Plant roads	13,000 cubic yards
Plant structures	19,000 cubic yards
Road bed-plant to quarry	18,000 cubic yards
	62.000 cubic yards.

Continental Lime would use the pit for approximately 6 months then contour and rehabilitate the site as determined by BLM.

Pursuant to 43 CFR, Group 2800, Continental Lime Inc. has applied for an 80-foot right-of-way for an access and haulage road connecting the proposed processing plant and quarry (Figure 2). Total length of the right-of-way is 6.2 miles of which 4 miles is existing road and 2.2 miles new road. The proposed route would be upgraded and graveled to accommodate anticipated heavy usage by the applicant. No large cuts and fills are anticipated, a few small drainages would be crossed requiring some fill and small culverts.

The right-of-way is requested for 30 years or exhaustion of the limestone reserves, whichever is less. However, data supplied by the applicant indicates possible reserves of over 100 years based on anticipated mining levels.

A portion of the right-of-way crosses an unpatented mining claim. There is some question as to the legal right of BLM to grant a right-of-way across unpatented mining claims. If such a right-of-way were issued, it would be subject to valid existing rights. The right-of-way could not interfere with the claimant's right to mine his claims and, if issued, Continental Lime could be forced to relocate around the mining claims at their own expense. An alternative route has been considered in Chapter 8.

Continental Lime has also applied for a 30-year 10-foot 12 kV transmission line right-of-way which would follow the proposed access and haulage road. The line would provide power to the crusher at the quarry site. Length of the right-of-way would be 6.2 miles. Clearing of vegetation would be limited to that requested for placement of the poles. No blading of the right-of-way would be allowed.

PLANNING AND ZONING DATA

Millard County has zoned these lands RF-1, open range and forestry, which allows for mining and related operations.

The proposed developments are located within BLM's Warm Springs Planning Unit for which a Management Framework Plan has been prepared. while the document does not specifically address the proposal, it also does not propose any land uses in the area which would be adverse to the proposed action. No other Federal agencies have proposed any land uses which would interfere with the mine and associated facilities.

CHAPTER II

DESCRIPTION OF EXISTING ENVIRONMENT

NON-LIVING COMPONENTS

a. Climate, Air Quality

A description of the local climate is one of extremes. Temperatures vary from a high of 105^{o} during the summer to a low of -30^{o} during the winter. Annual moisture accumulation averages 7.89 inches, most of which is received as winter snow. Summers are normally dry except for occasional short duration, high intensity thunderstorms (BLM, 1972).

Air quality appears to be good. The major source of air pollution is dust created by summer winds, travel on dirt roads, etc. Visibility at the Delta Airport ranges from 35 to 48 miles over a six-year period from 1949 to 1954 (Bowers, 1978).

b. Soils

Studies associated with the Intermountain Power Project (IPP) proposal list soils in the area as "desert soils", meaning soils formed with less than 8 inches annual precipitation. Surface soils range from silty clays to very fine sandy silts. Subsurface soils across the area are also variable consisting of medium stiff to stiff brown silty clays which contain, in zones, varying amounts of sands and gravel (Dames and Moore, 1979). Gravel outcrops are present along bench areas. No flood plains, alluvial valley floors, prime and unique farmlands, etc. are located in the area of concern.

c. Water - Watershed

No surface water is found in the immediate vicinity of the proposed quarry or any of the associated facilities. Runoff from rain and snowmelt follows the drainage of the normally dry Beaver River. North of the Cricket Mountains this drainage joins the Sevier approximately 20 miles from the inlet to Sevier Lake, a 200,000 acre mud flat.

Erosional conditions are well established in the existing dry washes and channels. No flood potential exists in the proposed development area.

Depth to groundwater is several hundred feet. This water contains a high salt content which makes it unsuitable for human consumption, although it has value for livestock use or industrial purposes.

d. Topography

The area of development lies within the Cricket Mountains which is part of the Basin and Range province in west-central Utah. The general topography of sand and gravel locations (material sites) consists of

gently sloping terrain off the east slope of the Cricket Mountains. The surface elevation at the material sites is about 4,920 feet (proposed site) and 5,120 feet (alternate site). The proposed material site has had approximately 30,000 cubic yards of sand and gravel removed, the alternate material site approximately 5,000 cubic yards. Both material sites have been trespassed to remove the sand and gravel. The part of the proposed limestone quarry site on public lands covered by mining claims is located on and adjacent to the northern end of Poison Mountain. The elevation ranges from 5,500 to 6,100 feet.

e. Geology

The sand and gravel at the proposed and alternate material sites is a Quaternary Age lake terrace deposit of loamy sand to rounded pebble-sized and cobble-sized rock fragments. These alluvial and colluvial sedimentary deposits are approximately 15 feet thick and were originally deposited as near shore lake sediments. The limestone at the proposed quarry site is of Middle Cambrian Age. The Cambrian Limestone sequence consists of four stratigraphic units listed in descending chronological order:

Marjum Formation	- Dark gray limestone and shaly limestone, locally dolomitic.
Swasey Limestone	- Dark massive limestone.
Whirlwind Formation	- Limy shale and shale with small limestone beds.
Dome Limestone	- Light gray - weathering massive limestone.

The high-grade limestone will be quarried principally from the Dome Limestone and some from the Swasey Limestone. The overburden, low-grade limestone and shale units are from the Swasey Limestone and the Marjum and Whirlwind Formations. A fault traverses the proposed quarry site.

f. Mineral Resources

Sand and gravel are the only known mineral resources at the material sites and adjacent areas. The high-grade limestone is the principal mineral resource at the quarry site, and there has been mining activity on unpatented mining claims for high-grade limestone on nearby public lands. Other mining claims are known to exist in this area. No other minerals of known economic importance exist at the quarry site and adjacent public lands. No known toxic materials are known to naturally occur in the limestone, sand and gravel, or overburden. Oil and gas leases exist on the material site locations, proposed road and power line rights-of-way, and surrounding areas, but there is no known oil

and gas activity in these areas. The oil and gas leases are Transaction Nos. U-19396, U-19397, U-19398, U-19399, U-19628, U-28327, U-28328, U-28329, U-38684, U-39802, U-39804, U-41848, U-41849, and U-41850. Geothermal leases exist on the proposed transmission line right-of-way and surrounding areas, but no known geothermal activity is present in the area. The geothermal leases are Transaction Nos. U-25644, U-25645, and U-37383.

LIVING COMPONENTS

a. Vegetation

Scattered pinyon and juniper trees are located on the east slopes of the Cricket Mountains in the vicinity of the proposed quarry. The remainder of the area is flatland covered with cold desert vegetation, including sagebrush, saltbush, galleta grass, Indian ricegrass, etc. (BLM, 1979).

Halogeton has invaded disturbed areas such as road sides and gravel pits.

A plant which is currently being considered for listing as a threatened species (Welsh, 1979) was found in several locations along the proposed access and haulage road right-of-way (Beels, 1979). Prior to this discovery, it was thought that this small plant, Penstemon nanus, was native to only a few places in extreme west central Utah. However, a subsequent inventory by BLM and Dr. Welsh of Brigham Young University has located the plant in several other areas on the east bench of the Cricket Mountains which indicates that its range is considerably more widespread than previously suggested (Beels, 1979).

b. Livestock

Two BLM grazing allotments would be affected by the proposed quarry, access and haulage road, and plant site. The proposed gravel pit and the east segment of the new haul road fall within the Twin Peaks Allotment. Authorized use of the unit is 500 cattle during the period November 1 through April 30. The quarry and the western part of the proposed new haul road are included within the Cricket Allotment on which 6,040 sheep are grazed from October 15 through April 30 of each year. Approximately 11 acres are required to support one animal unit per month (AUM) (BLM,1965). An allotment fence and cattleguard are the only range improvements in the area.

c. Wildlife

Wildlife density on the subject lands is low. Reptiles, including a variety of lizards and snakes, are most frequently sighted. Birds commonly nesting in the area include horned larks and other songbirds, mourning doves, ravens, ferruginous hawks, and red-tailed hawks. Golden and bald eagles, rough-legged hawks and marsh hawks often migrate into this area for wintering.

Deer have been observed in this area, although their numbers are low. Information relative to numbers, distribution and habitat condition is not available, although it is thought that deer utilize the Cricket Mountain year-round (BLM, 1978).

Approximately 50 antelope inhabit the Cricket Mountain area (BLM, 1978). Sightings are most common at the south end of the range, however.

Other animals include coyote, kit fox, bobcat, jackrabbits, and rodents.

No critical or otherwise important nesting or wintering areas occur in this general area. The endangered bald eagle is found widely distributed throughout Utah's West Desert during the winter months. Sightings in the Cricket Mountain area are sporadic during the months of November through March. The birds apparently migrate in from nesting grounds in the northern U.S. and Canada.

No other animals classified as threatened or endangered are found in this area.

HUMAN VALUES AND RESOURCES

a. Socio-Economics

The total population of Beaver and Millard Counties in 1978 was 10,700. The 1978 unemployment rate is 6-7 percent and nearly 300 people in this area are actively seeking jobs. Figures supplied by Architects/Planners Alliance, Inc. (1979) show that approximately 12% of the people in the area are self-employed, 25% are in agriculture and 63% are in non-agricultural type jobs (mining, government, etc.).

b. Visual Resources

The project area has little variance in landform, vegetation and color. Landform includes the rough, rolling Cricket Mountains where the quarry is proposed and the flat desert valley in which all other components of the project are proposed. Color consists of the muted grays and greens of desert shrub.

The project area appears largely natural. Graveled roads and material site excavations are the only man-made intrusions. The project area is adjacent to Utah Highway 257 where traffic averages 140 vehicles daily. (Utah State Department of Highways, 1978.)

All developments would be located in the foreground visual zone of an area of C quality scenery and low sensitivity. Under BLM's Visual Resource Management (VRM) system, these components would result in management of the area as a Visual Resource Management (VRM) Class IV area. This VRM class designation is tentative for purposes of this report, because no management decision has yet been made concerning the area.

(Visual Resource Management term, and methodology for determining VRM classes are described in the Appendix). Objectives for managing VRM Class IV areas allow visual modification from developments to subordinate the landscape character as long as the visual modification reflects what could be a natural occurrence in the characteristic area.

c. Wilderness

Public lands involved in the proposed action have been reviewed for wilderness values and have been determined not to have wilderness character (IPP Accelerated Wilderness Inventory, 1979).

d. Recreation

The general Cricket Mountain area provides antelope hunting opportunities. The existing road proposed for exclusive right-of-way is one of several hunter access roads into the area.

No designated natural or scientific areas occur in the project area.

The project area was inventoried for cultural and paleontological resources by Dr. Richard Holmer of the University of Utah and Mike Young, BLM. No values of any kind were discovered (see Appendix).

e. Access

Highway U-257, which connects Delta and Milford provides primary highway transportation to the plant site (Figure 1). A series of gravelled County and BLM roads exist throughout the Cricket Mountains.

The Union Pacific Railroad track that extends between Salt Lake City and Southern California parallels U-257 in this area. Continental Lime proposes to construct a railroad spur line to their plant so that rail transportation could be utilized.

CHAPTER III

ANTICIPATED IMPACTS

INTRODUCTION

The focus of analysis of impacts will be on the federal actions. Impacts associated with other phases of the project will be noted only briefly although the most significant impacts would result from construction and operation of the quarry and processing plant over which BLM has no direct control.

NON-LIVING COMPONENTS

a. Climate, Air Quality

Local climate would not be affected by implementation of the proposed action.

Air quality would undoubtedly be affected by the various operations of the proposal. Most notable would be an undetermined increase in particulate matter resulting from operations at the quarry, truck traffic between the quarry and plant and plant operation. Continental Lime proposes to install pollution control equipment at both the quarry and plant, however an undetermined amount of dust would still escape into the atmosphere. It would be noticeable to travelers on Highway U-257 because current air quality and visibility are high. It is not known what affect, if any, the burning of coal at the processing plant would have on air quality. Increases in particulate matter would remain as long as the quarry and plant are in operation.

The State of Utah has made a preliminary decision to accept these pollution control devices (Appendix).

Granting of the two overhead transmission line rights-of-way, the material sale and access and haulage road right-of-way, would result in short-term increases in particulate matter. Removal of gravel and heavy truck traffic on the road would be the primary sources of dust pollution. The amounts or the effect of the increased particulate matter are r known. Truck traffic would be constant as long as the project is in peration.

b. Soils

Approximately 480 acres of state land would be required for operation of the quarry and processing plant. Use of nearly all this area would be of a continuing nature for the life of the project (30 plus years). An undetermined amount of soil erosion would occur. Revegetation would be nonexistent with the exception of annual weeds such as cheatgrass and halogeton.

Some 35 acres of soil disturbance would occur on public lands. Intensive use of 20 acres associated with the access and haulage road would continue for the life of the project (30 + years). Disturbance to the remaining 15 acres would be temporary, not exceeding six months. However, soil erosion could be expected and soil productivity reduced on the 35 acres. Complete revegetation of sandy soils could take up to 30 years. Other soils could require 10 to 20 years for complete revegetation, if not seeded (BLM, 1979; SCS, 1975).

c. Water-Watershed

Implementation of the proposed action would not affect existing drainages, quality of groundwater, or flood potential. The ground water table would not be significantly lowered by pumping for industrial uses.

Erosion would probably not be a problem at the quarry since mostly solid rock would be exposed. The existing gravel pit which is proposed for a material sale already displays erosional features resulting from past gravel extraction. Thus, expansion of the site could further increase erosion at this location. Five acres would be involved. Use of the pit is not expected to exceed 6 months.

d. Topography

The removal of 62,000 cubic yards of gravel from the proposed natural site would leave a surface scar approximately four acres in area to a depth of five yards. The removal of limestone at the quarry site would change the profile of the northern end of Poison Mountain, lowering the elevation approximately 400 feet.

The surface scar at the material site would be temporary and with appropriate reclamation practices could be rehabilitated to the original slope and contour. However, the mineral environment of the material site would be permanently altered. The profile of Poison Mountain at the quarry site would also be permanently altered leaving an indefinite scar after the limestone was removed.

e. Geology

The Quaternary Age lake terrace deposits would be eliminated at the proposed material site, however the surrounding area has an abundance of these sedimentary deposits. The Cambrian limestone sequence at the quarry site would be destroyed. The four stratigraphic units (the Marjum Formation, the Swasey Limestone, the Whirlwind Formation, and Dome Limestone) would no longer exist as a chronological sequence of geologic events. However, these formations, as a chronological sequence, also exist in adjacent areas.

f. Mineral Resources

Sixty-two thousand cubic yards of sand and gravel would be removed from the proposed site. Approximately 24 million tons of mineable limestone and seven million tons of overburden are projected to be removed at the proposed quarry site. The proposed limestone mining activities do not appear to conflict with potential claimant activity on unpatented limestone mining claims on nearby public lands.

The areas proposed for the material sites, and road and power line rights-of-way are currently covered by oil and gas and geothermal leases as discussed in Chapter II. No oil and gas or geothermal leases exist in the limestone quarry site area. There appears to be no conflict between the proposed limestone mining activities and the potential activities of oil and gas or geothermal lessees.

The proposed limestone mining activities do not appear to conflict with potential claimant activity on unpatented limestone claims on nearby public lands. However, other mining claimants have expressed reservations about Continental Lime, Inc. limestone mining activities, especially proposed rights-of-way, possible interfering with their mining claims.

LIVING COMPONENTS

a. Vegetation

Up to 480 acres of state land would be used for the quarry and plant sites. The vegetation in these areas would be removed for the life of the operation.

Discretionary federal actions would result in the disturbance of approximately 35 acres of cold desert vegetation. A breakdown of acreages is as follows:

Utah Power & Light right-of-way - 7 acres
Continental Lime transmission line right-of-way - 4 acres
Material site - 4 acres
Access and haulage road - 20 acres.

Vegetative disturbance associated with transmission line installation would be temporary, not exceeding three or four months. The material site would be used for six months. The access and haulage road would receive heavy use for the entire life of the operation. Studies completed for IPP indicate that up to 30 years would be required for native vegetation to become re-established in sandy soils, 10 to 20 years in other soils. In the interim, halogeton which is sometimes poisonous to sheep would become established. Sheep loss in the area has been attributed to halogeton.

Construction of the haulage and access road as proposed would result in the removal of several individuals of the proposed threatened plant, Penstemon nanus. Installation of the two overhead transmission lines could also result in removal of some individual plants. No plants were found near the proposed gravel site. On-the-ground investigations by BLM personnel (Beels, 1979) and Dr. Stanley Welsh of Brigham Young University have revealed that Penstemon nanus is much more widely distributed than previously thought. It is believed, therefore, that implementation of the proposed action would not destroy a significant portion of the habitat for Penstemon nanus. Thus, the plant's existence would not be further threatened by the loss of a few individuals. This conclusion has been affirmed by Dr. Welsh (Beels, 1979).

b. Livestock

The 480 acres of state land that would be used for the quarry and processing plant would result in an annual loss of 44 AUMs (BLM, 1965). The 35 acres of surface disturbance projected for public lands would result in a loss of about 3 AUMs the first year and 2 AUMs each year thereafter for the life of the project.

Road kills associated with traffic on the access and haulage road could be a major adverse impact since the loss of any livestock animal would be considered significant by the owner.

No range improvements would be affected by the proposed action.

c. Wildlife

Impacts to wildlife would be associated with stress and road kill resulting from increased human activity in the area. Wildlife, however, would accommodate stress by displacement to adjacent areas without harm to any individual species. Road kills would mostly affect small rodents and reptiles whose populations would not be significantly reduced.

No effect on the two big game animals found in the project area, deer and antelope, is projected because the individuals range over an extremely large territory (BLM, 1978).

No threatened or endangered animals would be impacted by the proposed development. Bald eagles would continue to use this habitat during winter months.

HUMAN VALUES AND RESOURCES

a. Socio-Economics

The proposed project would create 24 new jobs. It is expected that four supervisors would be brought into the area and the remaining 20 jobs would be filled from the local labor pool. These positions would last for the life of the project thus providing a stable and extended income base for employed local residents.

The four supervisors would be able to obtain adequate housing and move into the area without straining existing community facilities and services. Local support facilities such as gasoline stations and grocery stores would benefit from the increased business resulting from the project.

b. Visual Resources

The overall project would be highly visible to travelers on Utah Highway 257. The visual impact would be by far greatest from actions proposed on state lands which do not require federal authorization nor management under VRM guidlines. The quarry would be obvious from the highway for a distance of 25 miles. The overall project would be an object of interest to some, and an aesthetically degrading intrusion to others.

The visual modification from the federally authorized developments would create low to medium contrast as viewed from U-257, and in all cases would meet the management objectives for VRM Class IV areas. (See Appendix for definition and determination of anticipated visual contrast from the proposed developments.)

c. Wilderness

The proposed action would not impact wilderness values.

d. Recreation

The proposed action would not impact antelope hunting opportunities. Because there are several roads into the Cricket Mountain area, intensive use of one road would have little affect on hunting access.

e. Access

Issuance of an exclusive right-of-way to Continental Lime would not actually restrict access into the area, although road closure would be an inconvenience to the public, especially other miners and livestockmen who would normally use the existing portions of the access and haulage road. Corallory roads found both to the north and south (Figure 2) would still provide access, although a greater travel distance would be required.

Trains crossing the highway on the proposed spur line would also be an inconvenience to travelers due to temporary blockage of U-257.

CHAPTER IV

MITIGATING MEASURES

NON-LIVING COMPONENTS

a. Climate, Air Quality

Dust pollution would be reduced along the haulage and access road by the use of a watering truck to periodically water down the road on dry days.

b. Soils

Soil erosion would be reduced and soil productivity increased by contouring the gravel site and seeding all disturbed areas with native species as determined by the Warm Springs Resource Area Manager.

c. Water - Watershed

See soils and vegetation sections.

d. Topography

The depressions that would result at the material sites should be filled and contoured to the original slope and elevation.

e. Geology

There are no mitigating measures for the Quaternary Age lake terrace deposits at the material sites and the Cambrian stratigraphic units at the quarry site; they would be destroyed. However, if the material sites are not reclaimed, they would provide geologic sites for further study of the lake terrace deposits in this area, and the quarry site may provide a stratigraphic section of existing Cambrian Limestones and Formations in this area for further geologic study.

f. Mineral Resources

There are no mitigating measures for removal of the gravel. Coordination between the applicant (proposed limestone mining activities) and other claimants and oil and gas and geothermal lessees would be necessary if the other claimants and lessees resumed or started any mineral activities.

LIVING COMPONENTS

a. Vegetation

Seeding with native species would aid in establishment of vegetative cover in disturbed areas. Time, method, and species used would be determined by the Warm Springs Resource Area Manager.

Slight adjustments in the access and haulage road could be made to avoid individuals of the proposed threatened plant, Penstemon nanus. A BLM official familiar with the species should be made available to suggest minor route modifications before construction begins.

b. Livestock

Loss of livestock would be partially mitigated if Continental Lime assumed financial responsibility for any losses attributable to its operation.

Livestock loss should be monitored to determine the need of fencing the access and haulage road at a future date.

c. Wildlife

No mitigating measures were identified.

HUMAN VALUES AND RESOURCES

a. Socio-Economics

No mitigating measures identified.

b. Visual Resources

No mitigating measures identified.

c. Wilderness

No mitigating measures identified.

d. Recreation

No mitigating measures identified.

e. Access

Inconvenience to other users of the access and haulage road could be reduced by the issuance of a non-exclusive right-of-way to Continental Lime. Also, not allowing Continental Lime to block off and rehabilitate that portion of the road next to Highway U-257, would further allow access into the area by other users. However, increased traffic on the road would also increase the possibility of accidents.

CHAPTER V

UNAVOIDABLE ADVERSE IMPACTS

NON-LIVING COMPONENTS

a. Climate, Air Quality

Federal actions, granting the two overhead transmission line rights-of-way, material sale, and access and haulage road right-of-way, would result in undetermined increases in particulate matter. Removal of gravel and heavy truck traffic would be the primary sources of dust pollution. Truck traffic would be constant as long as the project is in operation.

b. Soils

Some 35 acres of surface disturbance would occur on public lands. Intensive use of 20 acres associated with the access and haulage road would continue for the life of the project (30 plus years). Disturbance to the remaining 15 acres would not exceed six months. However, soil erosion could be expected and soil productivity reduced on the 35 acres. Ten to thirty years is required for complete revegetation, if not seeded (BLM, 1979; SCS, 1978).

c. Water - Watershed

The proposed gravel site already displays erosional features resulting from past gravel extraction. Further expansion of the site to four acres would increase erosion at this location. Use of the site is not expected to exceed six months.

d. Topography

Removal of 62,000 cubic yards of gravel from the proposed site would leave a surface scar approximately four acres in area to a depth of five yards. This depression could only be partially modified by contouring.

e. Geology

Qauternary Age lake deposits would be eliminated at the proposed material site, however, the surrounding area contains an abundance of these sedimentary deposits.

f. Mineral Resources

62,000 cubic yards of gravel would be removed from the proposed material site. No conflicts are expected between the transmission line rights-of-way and oil and gas and geothermal leases in the area. The proposed limestone project does not appear to conflict with other potential claimant activity on unpatented limestone claims on nearby public lands. However, other claimants have expressed reservations about Continental Lime's activities, especially the proposed access and haulage road right-of-way possibly interfering with their mining claims.

LIVING COMPONENTS

a. Vegetation

Discretionary federal actions would result in the disturbance of approximately 35 acres of cold desert type vegetation. Vegetative disturbance associated with transmission line installation would be temporary not exceeding three to four months. The gravel site would be used for six months. The access and haulage road would be used for the entire life of the operation. Ten to 30 years would be required for complete revegetation of disturbed areas (BLM, 1979). In the interim, halogeton, which is sometimes poisonous to livestock would become established in the disturbed areas.

Construction of the access and haulage road would result in the removal and loss of several individuals of the proposed threatened plant, Penstemon nanus. Installation of the two overhead transmission lines could also result in the removal of some individual plants. Use of the proposed gravel site would not result in any loss of the proposed threatened species. However, on-the-ground investigations have revealed that Penstemon nanus is much more widely distributed than previously thought. Therefore, implementation of the proposed action would not destroy a significant portion of the habitat for the species.

b. Livestock

The 35 acres of surface disturbance projected for public lands would result in the loss of about three AUMs the first year and two AUMs each year thereafter for the life of the project.

An undetermined loss of livestock could occur resulting from accidents along the access and haulage road. No range improvements would be affected.

c. Wildlife

No threatened or endangered species would be affected by implementation of the proposed action. An undetermined number of smaller animals would be killed on the access and haulage road. Mule deer and antelope would migrate from the immediate areas of activity.

HUMAN VALUES AND RESOURCES

a. Socio-Economics

No adverse impacts would be expected. The operation would provide steady employment for 20 persons from the local area. Local businesses should also benefit from the project.

b. Visual Resources

The visual modification from federally authorized actions would create low to medium contrasts as viewed from U-257 and would meet the management objectives for VRM Class IV areas.

c. Wilderness

No impacts identified.

d. Recreation

No impacts identified.

e. Access

Issuance of an exclusive right-of-way to Continental Lime would not actually restrict access into the area, although road closure would be an inconvenience to the public, especially other miners and livestockmen who would normally use the existing portions of the access and haulage road. Corollary roads found both to the north and south (Figure 1) would still provide access, although a greater travel distance would be required.

Trains crossing the highway on the proposed spur line would also be an inconvenience to travelers due to temporary blockage of U-257.

CHAPTER VI

SHORT-TERM USE vs. LONG-TERM PRODUCTIVITY

Implementation of the proposed action would provide for the development of a new and previously unused source of limestone. The project would provide steady employment for 20 persons from the surrounding area. Local business would also benefit from this activity.

An intensive land use would begin on over 500 acres (480 acres of state land) and continue for the life of the project. Topography would be permanently altered at the quarry site and the operation would be visible for at least a 25 mile stretch along U-257.

Soils disturbed by the proposed project (35 acres on public land, 480 on state land) would be taken out of vegetative production at least temporarily, and committed to the mining of limestone. Some change in wildlife and livestock distribution would result, but is not expected to be significant.

The limestone would be used in various markets, one being pollution control on projected coal fired power plants such as IPP. However, the mining of the limestone itself results in dust pollution in the local area.

CHAPTER VII

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Mining the proposed quarry site would result in the irreversible and irretrievable loss of topographic relief on the northern end of Poison Mountain. The removal and disposal of the limestone and gravel on the public lands would be an irreversible and irretrievable commitment of a resource.

The loss of any livestock or wildlife along the access and haulage road would constitute a commitment of a resource.

The proposed threatened plant, Penstemon nanus, would not be lost as a result of construction activities associated with the project although 35 acres of habitat would be destroyed. Studies associated with the proposed project have revealed a much wider distribution of the species than was previously known (Beels, 1979).

No threatened or endangered wildlife would be lost.

CHAPTER VIII

ALTERNATIVES

Alternatives to the proposed federal action involve relocation or denial of any or all the four components as described below.

UP&L 46 kV Powerline

Utah Power and Light Company has identified three alternatives to their preferred route. The first alternative is to tap into the existing line in Section 14 of Township 19 S., R. 8 W at the point that this line diverges from the railroad and runs toward the north Cricket Mountains. This alternative would proceed southwesterly along the west edge of U-257 to the plant site (Figure 4). Its length would be approximately 4 miles greater than the proposed route. It would have a greater visual impact since U-257 would be "boxed in" by lines on both sides of the highway where lines now exist only on one side.

A second alternative entails constructing the line about one and one-half miles west of the proposed route (Figure 4). This location crosses through steep foothill lands on which new roads would need to be built for construction of the line. This would result in an additional loss of up to one acre of vegetation which would further degrade wildlife habitat and livestock forage. New road construction would also be an additional visual intrusion. Construction costs would be higher because of the rugged terrain to be crossed and because this line is about one (1) mile longer than the proposed route.

The third alternative suggested by Utah Power and Light is no action. Choosing this alternative would probably result in cancellation of the entire project since electrical power is necessary for plant operation. Electrical generation at the plant site is not feasible economically. None of the impacts associated with implementation of the proposed action would occur.

Finally, a fourth alternative which has not been identified by UP&L is to build the powerline east of the railroad tracks, beginning and ending at the same points described in alternative 1 (Figure 4). The construction cost would be higher than that for the proposed action since this route is about 4 miles longer. However, less vegetation would have to be removed because construction and servicing personnel could use the existing service road that follows the railroad track. Also, little additional visual impact would result from placing the line in this location because the highway, railroad, and two overhead communication lines are already in place in a corridor fashion. The line would cross over the highway in two locations.

ACCESS AND HAUL ROAD RIGHT-OF-WAY

Alternatives to this proposed R/W are relocation (Figure 5) or denial. The alternate route requires construction of an entire new haul road, about 5.5 miles in length. Vegetation removed would total approximately 26.5 acres. This road would be readily visible from U-257. The road would cross Penstemon nanus habitat and several individual plants would be destroyed. Additional gravel would be required for road bed preparation.

Denial of the right-of-way application would force the company trucks to use existing routes. Total length is about 9 miles. The existing road does not meet standards for heavy use and, therefore, would have to be rebuilt in places and widened by about 20 feet throughout its length. Total clearing of vegetation would be around 19 acres. A safety hazard would be created where ore trucks would be forced to travel on U-257 between the existing gravel road turnoff and the proposed plant site.

CONTINENTAL LIME 12.5 kV POWERLINE

The alternative location of the line follows the north boundary of the alternative road route previously described (Figure 6). Impacts for this line are about the same as those described for the proposed route, except its distance is about .7 mile shorter.

Denial of the powerline would require generation of electricity by diesel or some other means for operation of the crushing mill. Choosing this action would preserve visual characteristics that would be degraded by an overhead powerline.

MATERIAL SALE

An alternate site for material extraction is an existing pit located in SE¼SE¼ of Section 29, T. 21 S., R. 9 W. This pit is smaller than the proposed material site and thus would need to be expanded by about 8 acres. Other impacts are the same as described for the proposed material site. The round-trip distance from the gravel site to the plant would be about 7 miles more than that for the proposed site. This pit is surrounded by the proposed threatened plant Penstemon nanus. Use of this pit would destroy several individuals of this species.

If the material sale is not allowed, it is anticipated that Continental Lime could obtain gravel from state lands or a private source.

CHAPTER IX

CONSULTATION AND COORDINATION

Public comment was first solicited at a public meeting held in Delta, Utah on April 12, 1979. This meeting, for which public notice was given in local newpapers was sponsored by the Utah Division of State Lands.

The focus of the meeting was to describe the project and solicit comment concerning the authorizing state actions. Approximately 15 people, most of whom represented local government or business interests, were present. Support for the development appeared to be unanimous among those in attendance.

The Bureau of Land Management has also requested input from government officials and other interested parties concerning the discretionary federal actions which are involved. A letter explaining BLM's role in the project was sent to the mayors of Delta and Fillmore, the chairman of the Millard County Commission, the Millard Industrial Development Committee, the Division of Wildlife Resources, affected grazing permittees and a mining claimant. To date, only the mining claimant, Mr. Melvin Bradshaw of Milford, Utah, has responded to the letter. Mr. Bradshaw has questioned BLM's authority to issue rights-of-way on the existing portions of the haul road and the proposed new road where it crosses his unpatented mining claims. It appears that this challenge may be settled by litigation.

Mr. Jay Roundy of Utah Power and Light, has submitted environmental data concerning the proposed 46 kV powerline.

Field inventories for threatened and endangered plants were completed by Paul Beels, range conservationist in the Warm Springs Resource Area. Field assistance and consultation has also been provided by Dr. Stanley Welsh, botanist at Brigham Young University.

Archaeological inventory and clearance was completed by Mike Young, realty specialist in the Warm Springs Resource Area, aided by Apryll Killpack, seasonal recreational aid. The transmission line route for Utah Power and Light was inventoried by Dr. Richard Holmer of the University of Utah for cultural and paleontological values. None were found.

The bulk of this document has been prepared under the direction of Ron Bolander, Utah State Office Environmental Coordinator. Other personnel who have prepared various sections include Jim Piani, geologist; Margaret Matthies, recreation planner; and Mike Young, realty specialist.

Decision Record/Rationale

Based on the contents of this environmental assessment record, I have determined that the four components of the proposed federal action be approved as described below. The positive sociological and economic benefits of the total development offset any adverse impacts to visual or ecological factors as have been discussed. The measures described in Chapter IV of this document will be incorporated into the authorizing grants to assure protection of environmental considerations.

This action would be consistent with Section 102 (a) (12) of the Federal Land Policy and Management Act (90 Stat. 2744) which states that "..... it is the policy of the United States that the public lands be managed in a manner which recognizes the nation's need for domestic sources of minerals, food, timber, and fiber from the public lands .....".

Access and Haul Road R/W

I have determined that the proposed access and haul road route be approved as a non-exclusive R/W. This route will provide safe and efficient transportation for ore hauling while minimizing surface disturbance through partial use of an existing road. The alternative route entails constructing an entire new road with no apparent benefit over the requested R/W. Requiring use of existing roads would be a safety hazard as well as an economic burden to the company because of the greater travel distance involved.

Continental Lime 12KV Powerline

This line should be placed within the north half of the right-of-way boundary for the road described above. Thus, the road and powerline will be in a corridor which will confine the visual impact of this development.

Denial of the powerline R/W would require power generation at the site. Because of the major expense involved, and the lack of significant environmental impact due to the powerline when viewed in terms of the total project, this choice is not acceptable.

Material Sale

A sale of gravel from the proposed site is appropriate because this is the closest existing pit to the plant location. Stipulations shall be incorporated into the sale to assure that the land, including existing scars, are reclaimed to original conditions.

Choosing the sale at the alternate site would require a greater travel distance to the construction area and would unnecessarily destroy a group of *Penstemon nanus*, a proposed threatened plant.

Rejection of either gravel sale location would deny a source of revenue to the federal government and would result in a new surface scar if a gravel pit is developed on state or private land.

Utah Power and Light 46 KV Line

The proposed route and the three alternatives suggested by UP&L are not acceptable because of lack of present access for construction and maintenance and/or degrading effect on visual characteristics.

I have, therefore, determined that the powerline shall assume the route described as alternative four which parallels the east side of the Union Pacific Railroad. Using this route will greatly minimize visual impacts since the line will be in an existing transmission and utility corridor. New road construction will not be necessary since access currently exists for the other facilities in the corridor. In addition, electrical service will be readily available for other developments along Utah Highway 257.

This decision is supported by Section 503 of the Federal Land Policy and Management Act which is explicit in the requirement that ".. ... rights-of-way in common shall be required to the extent practical ..."

The nature of the federal action involved is such that the quality of the human environment would not be significantly affected. Therefore, a statement as required by Section 102(2)(c) of the National Environmental Policy Act is not necessary.

Mark E. Bailey

Mark E. Bailey
Area Manager

7-12-79
Date

LITERATURE CITED

Architects/Planners Alliance, Inc., 1979. "Social economic Analysis: Lynndyl Alternative Site", Prepared for Intermountain Power Project. Salt Lake City, Utah.

Bowers, J. F., 1978. "Calculated Visibility Impacts of Emissions from the Proposed IPP Power Plant at the Lynndyl Site," H. E. Cramer Company Technical Report #TR-78 450-02. Prepared for Intermountain Power Project, Sandy, Utah.

Beels, Paul, 1979. Staff Report on Population Distribution of the Threatened Plant, Penstemon nanus. Fillmore Area Office, Bureau of Land Management, Fillmore, Utah.

Bureau of Land Management, 1979. Draft Environmental Impact Statement; Intermountain Power Project. Richfield District.

_____, 1965. Range Survey Warm Springs Planning Unit, Fillmore, District.

_____, 1972. Warm Springs Planning Unit. Unit Resource Analysis (URA) Fillmore District.

_____, 1978. Warm Springs Planning Unit. Unit Resource Analysis, Wildlife Section Update. Fillmore Area Office.

Dames and Moore, 1979. Soils and Foundation Study. Proposed Lime Plant 32 miles South of Delta, Utah for Continental Lime, Inc. Job No. 1116B-002-06. Salt Lake City, Utah, March 15, 1979.

Intermountain Power Project Accelerated Wilderness Inventory, 1979. Bureau of Land Management Wilderness Inventory Map, State of Utah.

Soil Conservation Service (SCS), 1975. Soils of Utah Bulletin 492. Agriculture Experiment Station. Utah State University, Logan, Utah.

Utah State Department of Highways, 1967. "Minerals Inventory, Millard County. Potential Sources, Pit Locations, Test Data, and Geology." Minerals and Research Division, Materials Inventory Section.

_____, 1978. Average Daily Traffic Map, March, 1978.

Utah State Land Board, 1963. Geologic Map of Southwestern Utah compiled by Lehi F. Hintze.

Welsh, S. L., 1979. Illustrated Manual of Proposed Endangered and Threatened Plants of Utah. U.S. Fish and Wildlife Service, Denver Federal Center, Denver, Colorado.

_____, 1979. Personal Communication, July 2, 1979. Brigham Young University, Provo, Utah.

CONTINENTAL LIME INC.
268 West Fourth South
Suite 201
(801) 363-7084

October 18, 1979

Bureau of Land Management
Utah State Office
University Club Building
136 East South Temple
Salt Lake City, Utah 84111

Supplement to Right-of-Way
Serial Number U-43199

Re: Application of Continental Lime Inc.
for Right-of-Way for 12 KV Power Line

Gentlemen:

I. INTRODUCTION

Continental Lime Inc. (the "Applicant") hereby makes application for a right-of-way for 12 KV Power Line across Federal lands in Millard County, used in connection with production of limestone from mining claims on National Resources Lands to connect the limestone quarry to the processing plant situated on certain lands of the State of Utah in Section 36, Township 21 South, Range 9 West, SLM.

A map of the proposed Power Line Right-of-Way is contained in Plate Map No. 6 included in Attachment No. 1 to the application. The Applicant requests that the right-of-way applied for hereunder be considered to form part of and be parallel to Continental Lime Right-of-Way, Serial No. U-43199.

This application is submitted in compliance with the presently promulgated regulations and in accordance with the provisions of the Federal Land Policy and Management Act of 1976. The Applicant understands that additional information as well as a non-returnable payment will be requested by the Bureau of Land Management when the environmental analysis or statement is completed and a route or site has been selected for the proposed right-of-way.

II. DESCRIPTION OF RIGHT-OF-WAY

The Applicant submits the following information in compliance with the existing regulations:

- This application is made pursuant to existing regulations contained in 43 CFR, Group 2800.

- The Applicant agrees that the right-of-way for hereunder, if approved, will be subject to the terms and conditions of the applicable regulations contained in 43 CFR, 2800. 1-S.

The right-of-way requested is pursuant to the terms of Title V of the Federal Land Policy and Management Act of October 21, 1976 (Pub. L. 94-579,90 Stat. 2776. 43 USC & 1761).

(A) The primary purpose for which the right-of-way is desired is that of transmitting electrical power between the Process Plant and Stone Plant a distance of 6.2 miles.

(B) The Applicant represents that it has not conducted any unauthorized use of the lands administered by the Bureau of Land Management. To the present time the Applicant's activities have included the exploration and location of mining claims on the public domain together with exploration on lands of the State of Utah included within an existing mineral lease, access to these mining claims and the State of Utah lease has been acquired through an existing road across Federal and State lands in the vicinity of the proposed right-of-way. Construction of improvements to right-of-way Serial No. U-43199 to start October 24, 1979.

(C) A full and complete disclosure of the plans, agreements and other information reasonably related to the use or intended use of the right-of-way including its effect on competition, is contained in Attachment No. 1.

(D) The construction and maintenance of the proposed 12 KV Power Line will be in accordance with good electrical practice and run parallel to the south side of right-of-way Serial No. U-43199.

(E) The term of years for which the right-of-way is requested is 30 years or exhaustion of the limestone reserves, whichever is less.

(F) The length in miles of the right-of-way is estimated to be 6.2 miles of which a portion of this length is contained within State lands or State leases and the mining claims of the Applicant. All remaining road access for the proposed development will either be on the State leases or will be obtained through existing State or Federal highways.

(G) The documents accompanying this application are identified as follows:

(1) Attachment No. 1 containing a complete description of the proposed right-of-way and the proposed limestone development of Continental Lime Inc.

(2) Copy of corporate qualifications as on file in U-38700.

III. CORPORATE AUTHORITY

The corporate qualifications of Continental Lime Inc. are on file with the Bureau of Land Management in Serial No. U-38700. Said filing has recently been amended and now includes a certified copy of the Articles of Incorporation as well as various other documents relating to the corporated existence of the Applicant. A resolution of the Board of Directors of Continental Lime Inc. authorizing the filing of this right-of-way application is also contained in said case file.

IV. NON-RETURNABLE PAYMENT

The Applicant will submit the non-returnable payment as required by Circular 2368 at the appropriate time.

V. DISCLOSURE REQUIREMENTS

The Applicant has prepared and has included in Attachment No. 1 a complete description of its proposed project together with information with respect to the effect of the granting of the right-of-way on competition.

CONTINENTAL LIME INC.

By C. Richard McNally
C. Richard McNally, President

CONTINENTAL LIME INC.
ATTACHMENT 1
DESCRIPTION OF THE PROJECT

CONTINENTAL LIME INC.
ATTACHMENT 1
DESCRIPTION OF THE PROJECT

I. QUARRY -

A. Exploration:

The Cricket Mountain area was explored and the general geology reviewed during February, 1978 and specific areas of interest were staked with placer mining claims TED 1 through 14 inclusive on February 28 and March 1, 1978. Additional areas were reviewed and staked on March 23, 1978, October 23, 1978, January 30-31, 1979, February 27-28, 1979 and March 2, 1979.

Outcrop areas of possible interest were sampled during February and March, 1978 and those areas showing good possibilities of containing mineable lime rock were review and exploration drilling sites outlined on March 22, 1978.

A general review of the areas was completed on April 1, 1978 by Steel Brothers Canada Ltd. representatives Mr. J. B. Jordon and Mr. Don Harvey.

Reconnaissance evaluation drilling was activated on April 14, 1978 and continued to April 27 with thirteen (13) holes completed totalling 1470 feet. Additional drilling was completed during the period from October 25 into late November, 1978 with eighteen (18) holes drilled totalling 2970 feet. The third and most recent period of drilling was concentrated in the Poison Mountain area and commenced February 9, 1979 and ended April 26, 1979 with 55 holes completed totalling 6877 feet. This drill data has been used to outline a limestone orebody in the Poison Mountain area and in the preparation of a preliminary design for a lime rock quarry.

B. Reserves:

Two areas believed to contain substantial tonnages of good limestone rock have been outlined by the 1978 and 1979 drilling programs.

In the Poison Mountain area, in Sections 25 and 36, Township 21 South, Range 10 West, limestone reserves of good quality have been established by the 1978 and 1979 drilling programs. The final mineable reserve estimate requires additional assay data but is approximately 24 million tons. Overburden in the area of interest totals about seven million tons of low grade limestone and/or overlaying non-limestone units.

In the area joining the corners of Sections 23, 24, 25 and 26, Township 21 South, Range 10 West, an area containing about 15 million tons was delineated by the 1978 drilling programs. Another 15 million tons is believed present in the area but additional drilling is needed to verify the tonnage and grade of limestone. Overburden stripping requirements are about 7 million tons.

C. Overburden:

In the Poison Mountain area, overburden varies from 0 feet over large areas to limited sections having up to about 60 feet of hanging wall dolomitic limestone and shaly beds. In wide areas, the upper exposed five to ten feet of the favorable "Dome" limestone bed is partially adulterated with soils and other surface debris and has to be considered as waste rock. Average thickness of the overburden in the Poison Mountain drill holes is 22 feet.

Two areas adjacent to the Poison Mountain Lime deposit have been proposed for disposal of overburden and waste rock and these areas are noted on Plate Map No. 1.

A large area on the east side of the proposed Poison Mountain quarry site, in an easterly trending gully in the W½ NE¼ of Section 36, Township 21 South, Range 10 West, could accommodate about ten million tons of waste rock. Waste rock in the quarry section adjacent to this proposed dump site is about 6.5 million tons.

A second area near the northeast end of the deposit is deemed able to accommodate an additional two million tons of waste rock. Blocked out overburden in the northern part of the proposed quarry and in the area that would be readily serviced by the smaller waste rock disposal area is about 0.5 million tons, consisting principally of thin limestone overburden from the northeast part of the deposit.

D. Development and Production

The quarry will be located within the bounds of the mining claims and the State of Utah limestone lease described below. The specific quarry location will be in the following areas as depicted on Plate Maps No's. 2 and 3:

Township 21 South, Range 10 West, SLB&M

Section 25: SE¼ SW¼, SW¼ SE¼ (TED 4 and 6)

Section 36: W½ NE¼ NW¼ (State Lease)

Quarry operations will be carried out in benching fashion using a drill and blast procedure to produce quarry run sized limestone. All mining will be conducted so as to comply with the rules, regulations and mining laws that are applicable, including the Utah Mined Land Reclamation Act. The limestone material will then be loaded into haul trucks with a rubber tired loader for transportation from the working face to the crushing and screening plant for sizing.

The crushing facilities will be situated at the quarry and will consist of a single impact crusher capable of 100% reduction to minus 6" in the first pass. Stone removed from the quarry will be crushed in the impact crusher at a rate of approximately 360 tons per hour. The crushed stone will then be screened on a three-deck screen. The plus 2" stone will be segregated and returned to the crusher. The minus 3/8" fines will be stockpiled at the quarry for utilization if markets become available. The stone screened to -2" + 3/8" will be loaded into trucks and transferred to the plant site at a projected rate of 1200 tons per day. This becomes the kiln feed of the processing plant.

The quarry crushing and screening plant will be constructed commencing in August, 1979 and will be completed by May, 1980. A total of 900 man days will be required for the construction phase (including all trades).

The electrical power to operate the crushing and screening plant will be supplied by a 12 KV Over-head Power Line. Dust from crushing operation will be suppressed by water sprays.

The manpower requirements at the quarry during normal operation is estimated to be as follows:

Job Classification	No.
Supervisory	1
Driller Blaster	1
Loader Operator	1
Truck Drivers	2
Crusher Operator - Utility Man	1
	6

The complete list of lease and claims of Continental Lime Inc. is as follows:

Utah State Lease No. ML-35572

Township 21 South, Range 10 West, SLB&M

Section 36: All

Township 22 South, Range 10 West, SLB&M

Section 2: All

Containing 1280 acres, more or less

MINING CLAIMS

Claim Name	Description	Location Date	Recording Date	Book/Page	BLM Filing No.
Ted 4	T21S, R10W §25: SE¼	2/28/78	3/2/78	126/279	UMC 41100
Ted 6 Amended	T21S, R10W §25: SW¼	3/1/78 3/22/78	3/2/78 3/24/78	126/281 126/691	UMC 41102
Ted 10	T21S, R10W §35: SE¼	3/1/78	3/2/78	126/285	UMC 41106
Ted 11	T21S, R10W §35: NE¼	3/1/78	3/2/78	126/286	UMC 41107
Ted 12	T21S, R10W §26: SE¼	3/1/78	3/2/78	126/287	UMC 41108
Ted 13	T21S, R10W §26: NE¼	3/1/78	3/2/78	126/288	UMC 41109
Ted 14	T21S, R10W §25: NW¼	3/1/78	3/2/78	126/289	UMC 41110
Ted 15	T21S, R10W §24: SW¼	3/22/78	3/24/78	126/692	UMC 41111
Ted 16	T22S, R10W §3: SE¼	3/22/78	3/24/78	126/693	UMC 41112
W.C. No. 1	T21S, R10W §23: E½NE¼SE¼	2/28/79	3/21/79	132REC/437	UMC 74317
W.C. No. 2	T21S, R10W §23: W½NE¼SE¼	2/28/79	3/21/79	132REC/438	UMC 74318
W.C. No. 3	T21S, R10W §23: E½SE¼SE¼	2/28/79	3/21/79	132REC/439	UMC 74319
W.C. No. 4	T21S, R10W §23: W½SE¼SE¼	2/28/79	3/21/79	132REC/440	UMC 74320
W.S. No. 1	T21S, R10W §24: SW¼	1/30/79	2/28/79	132REC/39	UMC 74292
W.S. No. 2	T21S, R10W §24: SW¼ §25: NW¼	1/30/79	2/28/79	132REC/40	UMC 74294

Claim Name	Description	Location Date	Recording Date	Book/Page	BLM Filing No.
W.S. No. 3	T21S, R10W §23: SE¼ §24: SW¼	1/30/79	2/28/79	132REC/41	UMC 74294
W.S. No. 4	T21S, R10W §23: SE¼ §24: SW¼ §25: NW¼ §26: NE¼	1/30/79	2/28/79	132REC/42	UMC 74295
W.S. No. 5	T21S, R10W §23: SE¼	1/30/79	2/28/79	132REC/43	UMC 74296
W.S. No. 6	T21S, R10W §23: SE¼ §26: NE¼	1/30/79	2/28/79	132REC/44	UMC 74297
W.S. No. 7	T21S, R10W §23: SE¼ §26: NE¼	1/30/79	2/28/79	132REC/45	UMC 74298
W.S. No. 8	T21S, R10W §25: NW¼	1/31/79	2/28/79	132REC/46	UMC 74299
W.S. No. 9	T21S, R10W §25: NW¼, SW¼	1/31/79	2/28/79	132REC/47	UMC 74300
W.S. No. 10	T21S, R10W §25: NW¼ §26: NE¼	1/31/79	2/28/79	132REC/48	UMC 74301
W.S. No. 11	T21S, R10W §26: NE¼, SE¼ §25: NW¼, SW¼	1/31/79	2/28/79	132REC/49	UMC 74302
W.S. No. 12	T21S, R10W §26: NE¼	2/27/79	3/21/79	132REC/441	UMC 74303
W.S. No. 13	T21S, R10W §26: NE¼, SE¼	2/27/79	3/21/79	132REC/442	UMC 74304
W.S. No. 14	T21S, R10W §26: NE¼	2/27/79	3/21/79	132REC/443	UMC 74305
W.S. No. 15	T21S, R10W §26: NE¼, SE¼	2/27/79	3/21/79	132REC/444	UMC 74306
W.S. No. 16	T21S, R10W §25: SE¼	2/27/79	3/21/79	132REC/445	UMC 74307

Claim Name	Description	Location Date	Recording Date	Book/Page	BLM Filing No.
W.S. No. 17	T21S, R10W §25: SW¼, SE¼	1/31/79	2/28/79	132REC/50	UMC 74308
W.S. No. 18	T21S, R10W §25: SW¼	1/31/79	2/28/79	132REC/51	UMC 74309
W.S. No. 19	T21S, R10W §25: SW¼	1/31/79	2/28/79	132REC/52	UMC 74310
W.S. No. 20	T21S, R10W §25: SW¼	1/31/79	2/28/79	132REC/53	UMC 74311
W.S. No. 21	T21S, R10W §25: SW¼ §26: SE¼	1/31/79	2/28/79	132REC/54	UMC 74312
W.S. No. 22	T21S, R10W §26: SE¼	1/31/79	2/28/79	132REC/55	UMC 74313
W.S. No. 23	T21S, R10W §26: SE¼	3/2/79	3/21/79	132REC/446	UMC 74314
W.S. No. 24	T21S, R10W §35: NE¼	2/28/79	3/21/79	132REC/447	UMC 74315
W.S. No. 25	T21S, R10W §35: NE¼	2/28/79	3/21/79	132REC/448	UMC 74316

II. RIGHTS OF WAY

A. Roads:

Completion of road right-of-way (Serial No. U-43199) will be required to connect the process plant facility to the quarry operation, before the 12 KV Power Line construction begins.

B. Power Line Construction:

- 1-0 ACSR Aluminum Covered Steel Core Wire
- 35' Wood Poles Spaced at 400 Feet
- 9' Wood Cross Arms
- 3 Phase Circuit in a Horizontal Plane with a shield wire (6) Feet above the phase conductors
- System Voltage 12 KV
- All construction will be in accordance with the National Electric Safety Code, National Electric Code, and other applicable National and local standards.

C. Electrical:

Electrical power service to the Process Plant site will be provided by Utah Power and Light Company and the right-of-way application for this line will be made by the utility under separate cover. The contact with the utility is:

Utah Power and Light Company
ATTN: Lavell Jensen
1407 West North Temple
Salt Lake City, Utah 84115
(801) 350-3535

A description of the equipment Continental Lime Inc. proposed to utilized as owned electrical equipment has been prepared by Steve Hagemoen of Universal Dynamics and is attached hereto as Exhibit B.

D. Telephone:

Telephone service to the site will be provided by Continental Telephone Co. using an existing phone line of the Union Pacific Railroads adjacent to the present railroad and extending over Section 36 to the plant site. The contact with the utility is:

Continental Telephone Co.
% Keith Rawlinson
State Engineer
Tremonton, Utah 84337

E. Railroad:

A Union Pacific railway spur line will be incorporated as part of the plant site and will be located as shown on Plate Map No. 1 falling entirely in State Section 36, Township 21 South, Range 9 West.

F. Importance of the Rights of Way:

The rights of way mentioned are essential to the construction of the proposed limestone opration because of the dominant position of the United States as landowner in the area of the proposed limestone quarry and processing plant. Electrical Power is necessary to drive motors at the quarry crushing plant and in light of the high cost of fossil fuels (Diesel generated power) an electrical connection is required between process and rock plants. Therefore, without the proposed rights of way or reasonable alternatives, the project cannot proceed.

III. PROCESSING PLANT

A. Development and Production

The plant facilities will consist of an office and dry warehouse building, a maintenance shop, a control building, various small out buildings, including a small pumphouse, and the several components of the transportation facilities. These are described in greater detail below.

Excavation at the plant site to remove up to five feet of existing clays and silts is scheduled to commence on site in May, 1979. The other dates mentioned herein assume the commencement of excavation in May and any slippage in this date will result in a similar slippage in the other dates mentioned. Once the clays and silts have been removed, the excavated area will be covered with a compacted granular material which serves as a replacement fill and as th e base for the plant foundation.

Following the excavation and base preparation, underground services such as power and water will be installed. Concrete foundations will be poured for the major structures. It is estimated that this work will be completed by September, 1979. Upon completion of the foundation work, another layer of fill will be brought on site to raise the entire plant site to a level approximately five feet above the original grade of the plant site.

The erection of structural steel supports and buildings and the installation of equipment will begin in October, 1979. It is estimated that the entire project will be completed by June, 1980.

The equipment to be used in the various phases of the construction will consist of:

Excavation - hydraulic backhoe, trucks and front-end loaders.
Backfill - front-end loaders, trucks, bulldozers and compactor.
Steel Erection - cranes having up to 80 ton capacity and 150 foot reach.

The permanent equipment to be installed will consist of the following:

18" and 24" wide belt conveyours
25' diameter preheater with 11 rams
12' diameter x 150' long rotary kiln
600 hp induced draft fan
10' - 6" diameter ducan dynamic scrubbers
Contact lime cooler
Bucket elevators
2000 ton kiln run storage silo (concrete)
2 - 500 ton product silos (steel)
1 - 500 ton coal silo (steel)
Concrete settling ponds
10' x 100' long truck scale
Lime dust collector baghouse
Miscellaneous ancillary equipment

Pollution control devices to be used in the facility are listed below:

Crushing Plant - water sprays
Coal Handling - baghouse
Lime Handling - baghouse
Lime Production - wet scrubber

The State of Utah has made its preliminary decision to accept these pollution control devices as evidenced by a letter of April 11, 1979, attached hereto as Exhibit D.

The buildings to be constructed are more particulary described as follows:

40' X 80' office / dry warhouse building
60' X 60' maintenance shop
31' X 40' control building

Small pumphouse, metal control center, etc.

A site layout plant for the plant is contained on Plate Map No. 4 and an isometric sketch of the plant is contained in plate Map No. 5.

A flow sheet for the facility is attached hereto as Exhibit A.

The material balance flow wheet (Exhibit E) indicates a requirement of 1200 T.P.D. movement of material from quarry to plant on a five day per week schedule. This translates to 40 highway tractor trailer truckloads of 30 tons each per day.

The production capacity of the plant will be 150,000 tons of quicklime per year.

Product will be transported from the plant to the market via rail and truck. It is anticipated that the lime will be used for industrial and chemical purposes, such as PH control and fluxing.

The only by-product of production is particulate matter which is collected by the kiln exhaust gas scrubbing system. This particulate matter will be collected and diposed of either through sale or land fill disposal in a designated area.

Plant site construction is scheduled between May, 1979 and June, 1980. The construction phase will utilize the following skills:

Laborers	1100 man days
Carpenters	600 man days
Iron Workers	2700 man days
Millwrights	500 man days
Pipe Fitters	200 man days
Refractory Masons	300 man days
Electricians	800 man days
Others	500 man days
TOTAL	6700 man days

Laborers and carpenters needed for the construction phase are expected to be available in Millard County and this source will be used to the extent available. Workers in the other trades will be employed from the more industrialized areas of Utah as necessary. The total construction labor force of 7600 man days for the quarry and plant site construction will earn over $850,000 plus living expenses. Workers who reside out of Millard County will stay in local accommodations in Delta, Milford, Fillmore, etc.

The production labor source will primarily be local being drawn from the immediate areas of Delta, Fillmore and

Milford as available. The plant labor force during production will be as follows:

Job Description	No.
Supervisory	3
Firemen	4
Firemen Helpers	4
Maintenance	3
	18

B. Resources:

1. Fill Material:

Fill material required for plant site road and railbed construction is estimated to be some 62,000 yards and is available from an existing gravel quarry marked "Gravel Pit" on Plate Map No. 1. Fill material is essential for plant constructions inasmuch as the virgin ground consists of collapsable soils and must be replaced in order to support the structures proposed. Recommendations for methods and procedures for soil replacement have been determined by Dames and Moore after extensive site examination. The soil survey conducted in connection with this examination is identified as Job No. 11168-002-06 and is dated March 15, 1979.

2. Coal:

The kiln fuel will be made up entirely of coal available from several sources within the State of Utah. A typical analysis of the coal is as follows:

	Percent Water Content	Percent Volatile Matter	Percent Ash	Percent Fixed Carbon	Percent Sulphur	BTU/lb	Calories per gram
As Received	11.64	36.88	9.03	42.45	0.42	10,924	6 069
Air Dried	1.41	41.74	10.22	48.04	0.48	12,363	6 868

Quantities of coal required are indicated on the material balance sheet attached hereto as Exhibit E. Consumption of coal will be approximately 32,381 tons per year.

3. Water:

Water for the production facilities will be obtained from a gravel pak 10" well drilled to a depth of 700 feet. The well is located at the point marked "Proposed Well" on Plate Map No. 1. Water is available in the area as indicated by test wells and an analysis completed by Hydro-Search Inc. Study (1186-79). Continental Lime Inc. obtained permission to drill such wells from the State Engineer in connection with Water Application No. 52318.

C. Miscellaneous:

1. Grazing Rights:

The plant site is not now subject to a grazing lease issued by the State of Utah and it is anticipated that there will be no loss of grazing rights because of the construction of the plant or the improvement of the existing road. At the quarry location, it is anticipated that loss of grazing, if any, will be minimal.

2. Benefits to Local Economy:

The local economy will benefit from the construction phase because of the fact that most of the labor force employed will be acquired locally and as mentioned above, the laborers will earn over $$50,000 plus living expenses. In addition, the local economy will benefit from the acquisition of materials, parts and supplies to the extent they are available locally.

The production labor force will also primarily be local and, therefore, a great portion of the salaries paid to the 24 full-time production workers will be of benefit to the local economy. In addition, many support industries, such as the railroad, the coal industry, electric power companies, trucking industry and others, will benefit from the existence of the plant.

3. Tax Base:

The plant will be constructed on lands leased from the State of Utah. In addition, a substantial portion of the quarry is located on lands subject to a mineral lease from the State of Utah. Therefore, the existence of the plant will make substantial contributions to the State of Utah through the payment of rentals and royalties. In addition, the improvements to the property will be taxed under the ad valorem property tax and additional contributions will be made to the tax base of the area through the payment of sales and income taxes.

4. Financial Capability

Continental Lime Inc. is a wholly owned subsidiary of Steel Brothers Canada Ltd. and is supported financially by its parent. While recent figures are not yet available, Steel Brothers Canada Ltd. had 1977 sales of $70,000,000. Such further evidence of financial capability will be provided upon request.

5. Abandonment:

It is the plan of the Applicant that abandonment of the quarry will be conducted in accordance with a reclamation plan approved by the Division of Oil, Gas and Mining of the State of Utah pursuant to the Utah Mined Land Reclamation Act. In addition, the existing mineral lease from the State of Utah and the special use lease covering the plant site contain requirements with respect to abandonment of the property. These requirements will be satisfied at such time as the leases have been terminated or the plant and quarry are abandoned.

PLATE MAPS AND EXHIBITS

Plate Maps

Plate Map No. 1 - Index Map

Plate Map No. 2 - Preliminary Design - Poison Mountain Limestone Quarry

Plate Map No. 3 - Topographic Map

Plate Map No. 4 - Site Layout

Plate Map No. 5 - Lime Plant - Isometric

Plate Map No. 6 - 12 KV Line and Stone Plant Flow Sheet

Exhibits

Exhibit A - Flow Sheet

Exhibit B - Letter - Universal Dynamics

Exhibit C - Construction Schedule

Exhibit D - Letter - State of Utah

Exhibit E - Material Balance Sheet

Exhibit F - Right-of-Way Serial No. U-43199